TB CARE I

TB CARE I - Indonesia

Year 2

Annual Report

October 1, 2011 – September 30, 2012

Submitted

October 31, 2012

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List of Abbreviations

ACSM	Advocacy, Community and Social Mobilization
AIDS	Acquired Immunodeficiency Syndrome
APA	Annual Plan of Activity
ART	Anti Retroviral Therapy
Askes	Asuransi Kesehatan (Health Insurance Company)
ATM	AIDS, Tuberculosis, Malaria
ATS	American Thoracic Society
BBLK	Balai Besar Laboratorium Kesehatan (Grand Office of Health Laboratory)
BLK	Balai Laboratorium Kesehatan (Office of Health Laboratory)
C/DST	Culture/Drug Sensitivity Test
Cat	Category
CCM	Country Coordinating Mechanism
CDR	Case Detection Rate
CPT	Cotrimoxazole Prevention Therapy
DHO	District Health Office
DIY	Daerah Istimewa Yogyakarta (Yogyakarta Special Region)
DKI	Daerah Khusus Ibukota (Capital Region)
DOTS	Direct Observed Treatment - Short Course
EQA	External Quality Assurance
FHI360	Family Health International 360
FLD	First Line Drug
GF	Global Fund
HCW	Health Care Worker
HDL	Hospital DOTS Linkage
HIV	Human Immunodeficiency Virus
HQ	Head Quarters
HRD	Human Resource Department
IC	Infection Control
IEC	Information, Education, and Communication
IPT	Isoniazide Prevention Therapy
IUATLD	International Union Against Tuberculosis and Lung Disease
Jamkesmas	Jaminan Kesehatan Masyarakat (Social Security and Health Insurance)
Jamsostek	Jaminan Sosial Tenaga Kerja (Social Security and Health Insurance for Employee)
JATA	Japan Anti Tuberculosis Association
LED	Light Emited Diode
LQAS	Lot Quality Assurance Sampling System
M&E	Monitoring and evaluation
MDR	Multi Drug Resistant
MIFA	Management Information for Action
MoH	Ministry of Health
MoLHR	Ministry of Law and Human Rights
MoU	Memorandum of Understanding
MSH	Management of Science for Health
MTB	Mycobacterium tuberculosis
MTB/RIF	Mycobacterium tuberculosis/Rifampicin resistant
NAD	Nangroe Aceh Darussalam
NAP	National AIDS Program
NGO	Non-governmental Organization
NRL	National Reference Laboratory
NTP	National Tuberculosis Program
OR	Operational Research
PCA	Patient Centered Approach
PHO	Provincial Health Office

PLHIV	People Living with HIV
PMDT	Programmatic Management of Drug Resistant Tuberculosis
PMU	Project Management Office
PPM	Public Private Mix
QUOTE TB	Quality of Care as seen through the Eyes of the Patient
RS	Rumah Sakit (Hospital)
SEARO	South East Asia Regional Office
SIKDA	Sistem Informasi Kesehatan Daerah (Regional Health Information System)
SITT	Sistem Informasi Tuberkulosis Terpadu (Integrated Tuberculosis Information System)
SLD	Second Line Drug
SMT	Senior Management Team
SOP	Standard Operating Procedure
SRL	Supranational Reference Laboratory
SSF	Single Stream Funding
TA	Technical Assistance
TB	Tuberculosis
TBCTA	Tuberculosis Coalition for Technical Assistance
USAID	U.S. Agency for International Development
WHO	World Health Organization

Executive Summary

TB CARE I Indonesia is a continuation of Tuberculosis Coalition for Technical Assistance program (TBCTA, 2000-2005) and Tuberculosis Control Assistance Program (TB CAP, 2005-2010) of USAID support to Indonesian government for National TB program. Technical assistance and support are being delivered to Indonesia National TB Program (NTP) for all 8 TB CARE I technical areas, namely 1) universal access, 2) laboratory strengthening, 3) TB infection control, 4) drug resistant TB management, 5) TB-HIV collaboration, 6) health system strengthening, 7) M&E, surveillance and operational research, and 8) drug management. TB CARE I support is in line with TB National Strategy 2010 – 2014, complementary to GF funded activities.

In Indonesia, TB CARE I is led by KNCV Tuberculosis Foundation (KNCV) and implemented by KNCV with 6 collaborating partners; American Thoracic Society (ATS), Family Health International (FHI 360), International Union Against Tuberculosis and Lung Disease (The Union), Japan Anti-Tuberculosis Association (JATA), Management Sciences for Health (MSH) and World Health Organization (WHO). TB CARE I APA2 support in Indonesia is made possible by the substantial contribution of 117 TB CARE I staffs in central, provincial and health facility level.

With a total buy-in amount of US$ 10,000,000 from the USAID Mission for APA2, TB CARE I worked in collaboration with the NTP both at national, provincial and at the health facility level. Its supports mainly focused in ten provinces, these provinces are selected based on the TB burden, TB program performance, remoteness, population density, etc. These provinces are North Sumatra, West Sumatra, Riau Islands, Jakarta Special Region (DKI), West Java, Central Java, East Java, Yogyakarta Special Region (DIY), South Sulawesi, West Papua, and Papua. Therefore, according to 2010 population data, the population served by TB CARE I APA2 was over 150 million people, that is, around 65% of Indonesia population.

In summary, during the period of APA2, TB CARE supported in the following areas of work:

1) **Promoting the use of new laboratory diagnosis technology through GeneXpert implementation:** TB CARE procured 17 GeneXpert machine (PMU/KNCV), to facilitate the prompt diagnosis and enrollment of MDR TB. Presently 5 GeneXpert machines are operational. To date, GeneXpert tested 1010 suspects, among them, 254 are MTB/Rif resistant. Among these 254 resistant cases, 102 were put on treatment.

2) **Scaling up programmatic management of drug-resistant TB (PMDT):** Since the beginning of APA2, TB CARE I has been providing support for 5 PMDT sites. Four new sites (Adam Malik hospital in North Sumatra, Hasan Sadikin hospital in West Java, Sardjito hospital in DIY, and Sanglah hospital in Bali) were established with substantial support from TB CARE I in APA2. In addition to that five sites are also assessed and expected to start PMDT diagnosis and treatment in the beginning of 2013.

3) **Increased quality TB services delivered by service providers:** Extensive technical assistance was conducted through supervision, mentoring, and on-job training by all TB CARE I partners to improve the public accessibility of quality TB services. During APA2, The number of hospital implementing DOTS increased from 325 to 397, however good/moderate quality DOTS observed in 189 hospitals only. While number of prisons conducting TB screening to inmates increased from 10 to 20 this year. In addition to these, TB CARE I played important role in the inclusion of quality TB service in hospital accreditation standards. The engagement of 3 major insurance companies, namely Askes (coverage: 17.2 million people), Jamsostek

(4.9 million employees) and Jamkesmas (76.4 million people)[1], increases accessibility to quality diagnosis and treatment.

4) **Strengthened TB surveillance through the development and implementation of integrated TB information system (SITT):** The development and implementation of a web-based TB case and logistics recording and reporting system called SITT were not only aimed to assist NTP to meet one of Global Fund Conditions Precedent 2012, but mainly as means of TB CARE I support in strengthening national TB surveillance. Currently the system is being implemented in all 33 provinces, with 2012 quarter 1 and quarter 2 data available for more than 91% (443 out of 497) and 73% (362 out of 497) of all districts in Indonesia. Along with the process, TB CARE I also provided extensive supports for the submission of national TB data to WHO global data collection system before due 16 May 2012.

5) **Promoting TB control components to be integral plan in exit strategy document**: TB CARE I support in this area resulted in development of official exit strategy policy that was published in April 2012. The economic burden of TB was also analyzed from providers' perspective to advocate local governments and insurance companies to increase their funding for TB.

[1] [1]Source Indonesia Social Security (Jamsos Indonesia) http://www.jamsosindonesia.com/cstatistic/view/jaminan-kesehatan-nasional_6 [Accessed October 25, 2012]

Introduction

Indonesia is one of high TB burden, high HIV burden and high MDR-TB burden countries. According to WHO (2012), estimated TB prevalence (all cases) are 680,000 cases and estimated TB incidence is 450,000 new cases per year, with number of death caused by TB is 65,000 yearly. TB case notification (all-forms) in 2011 was 321,308 with treatment success rate as high as 90% (2010). It is estimated that MDR-TB burden in Indonesia is 1.9% (1.4 - 2.5) for new cases and 12 (8.1 – 17) for retreatment cases. In 2011, 1280 out of 3511 TB patients with known HIV status were HIV positive.

TB CARE I Indonesia is the third USAID five-year cooperative agreement (2010-2015) after the Tuberculosis Coalition for Technical Assistance program (TBCTA, 2000-2005) and TB CAP (2005-2010). TB CARE I APA2 in Indonesia is implemented by a coalition of 7 international organizations in TB control. KNCV Tuberculosis Foundation (KNCV) is the prime partner and 4 in-country collaborating partners, i.e. Family Health International 360 (FHI 360), Japan Anti-Tuberculosis Association (JATA), Management Sciences for Health (MSH), and World Health Organization (WHO); and 3 other collaborating partners, i.e. American Thoracic Society (ATS) and International Union Against Tuberculosis and Lung Disease (The Union). TB CARE I is providing support to the National TB Program (NTP) for the implementation of the National Strategic Plan (STRANAS 2011-2014) through well-coordinated assistance by TB CARE I partners through their country offices and respective headquarters. TB CARE I Indonesia's main approach is building capacity in all technical areas, assuring that all assistance is complementary to the support provided by other sources including GF ATM. External consultants, where necessary, provided technical support to selected areas with the objective to train and coach national technical officers and assist the NTP in problem solving. This support was realized through country visits and distance assistance. TB CARE I supported NTP at central level and also at provincial and district level. Selection of the provinces and districts is based on the priorities of NTP as described in the National Strategic Plan, as well as the burden of MDR-TB, TB/HIV, remoteness of the area, and performance of the program.

Technical and Geographical Scope

TB CARE I Indonesia APA2 program activities were complementary to GF ATM SSF Phase 1 supported activities and encompassed 8 technical areas. The technical areas are:

1. Ensuring universal and early access of TB services: Ensuring universal access to quality TB services through expansion of public-private mix (PPM) – that is, the engagement of private health care providers in TB-DOTS program; Hospital DOTS (Direct Observed Treatment, Short-Course) Linkages; TB control in prisons and detention centers; TB service delivery to people living in remote/low performance areas.

2. Strengthening laboratory system and network: expanding technical laboratory capacity; rolling out of new external quality assurance (EQA) method using LQAS (Lot Quality Assurance Sampling) for smear microscopy; expanding capacity for culture and drug sensitivity test (C/DST); and supporting introduction of new diagnostics (phase-wise implementation of GeneXpert MTB/RIF)

3. Implementing TB infection control: Scaling up implementation of TB-IC strategies including implementation of infection control in PMDT hospitals, prisons and treatment centers

4. Control of multi drug resistant (MDR) and extensively drug resistant (XDR) TB through PMDT: Improving the quality of PMDT in 5 existing sites and supporting stepwise scale up of

Programmatic Management of Drug resistant TB to 4 new sites, complementary to operational support provided by the GF ATM

5. TB-HIV collaboration: Improving prevention diagnosis and treatment of TB–HIV co-infection in 8 provinces (North Sumatra, Riau Islands, DKI, West Java, Central Java, East Java, Papua, and West Papua)

6. Health Systems Strengthening: Supporting health system strengthening including human resource development and support development of exit strategies to greatly increase domestic funding for TB with an emphasis on costs, government allocations and revenue generation (especially from insurances)

7. Strengthening TB surveillance and Operational Research: Strengthening surveillance and improving the capacity to analyze and use quality data for decision-making. This includes integration to the National Data and Information Center (Pusdatin) for National Health Surveillance (SIKNAS), piloting case based reporting from district to national level, implementing Management Information For Action, scaling up and improving functioning of e-TB Manager and improving capacity for operational research

8. Improving Drug Management: Improving drug and pharmaceutical management to ensure uninterrupted supply of first and second line TB drugs to all health facilities/PMDT sites

Geographically, TB CARE I Indonesia's support is focused on 10 out of 33 provinces in Indonesia. This means that TB CARE I is mainly serving 45% of all districts in the whole country (226 out of 497) and 65% of all country population (155 million out of 237 million, based on population census 2010), as shown in table below.

Table 1. TB CARE I APA2 supported provinces and served populations

No	Name of Provinces	Population (2010)	TBCARE I APA2 Technical Area							
			UA	Lab	TB IC	PMDT	TB-HIV	HSS	M&E, Sur & OR	DM
National Level			x	x	x	x	x	x	x	x
1	North Sumatera	13,000,000	x	x	x	x	x		x	
2	West Sumatera	4,847,000	x	x		x			x	
3	DKI Jakarta	9,600,000	x	x	x	x	x		x	
4	West Java	43,000,000	x	x	x	x	x		x	
5	Central Java	32,400,000	x	x	x	x	x		x	
6	East Java	37,500,000	x	x	x	x	x		x	
7	Jogjakarta	3,452,000	x	x	x	x			x	
8	South Sulawesi	8,100,000	x	x		x			x	
9	Papua	2,852,000	x	x		x	x		x	
10	West Papua	761,000	x	x			x		x	
Total population served		155,512,000								

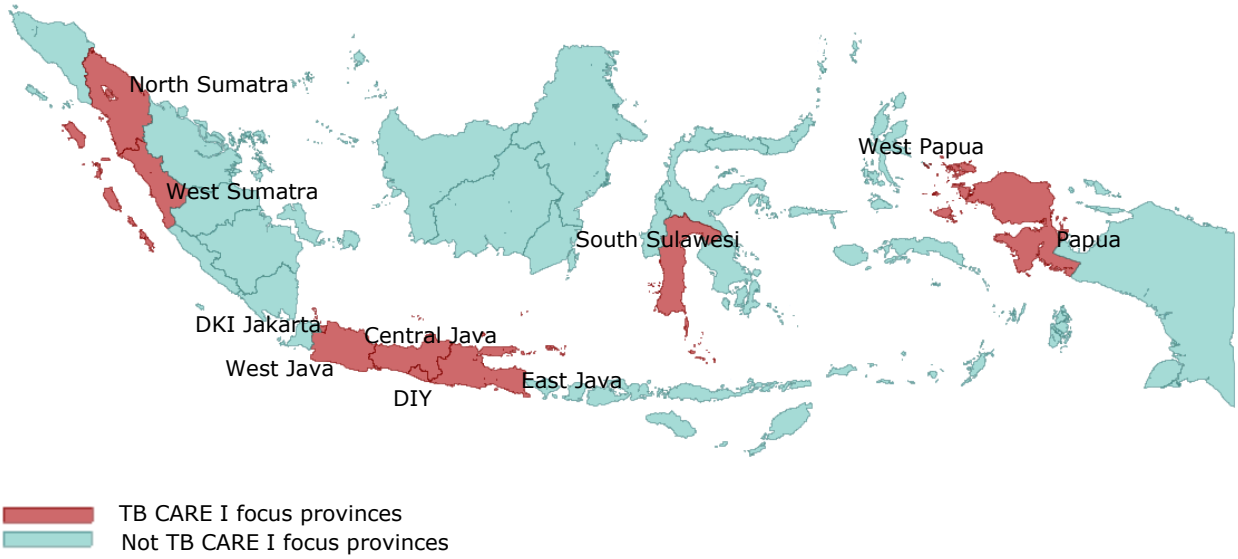


Figure 1. TB CARE I Provinces

Total Buy-In and Expenditure

TB CARE I APA2 was approved at 19 February 2012 and finished in 30 September 2012. Total obligated amount was US$ 11,873,307 and total budgeted amount was US$ 11,764,629, with a total buy-in amount of US$ 10,000,000. At the end of September 2012, an amount of US$ 7,416,093 (63%) was spent.

Universal Access

The partners collaborating in Universal and Early Access activities under APA2 were KNCV, WHO, FHI 360, and ATS. Access to DOTS services must be available for all TB patients regardless of their socio-economic background, demographic characteristics, and clinical condition. Several provinces have TB case notification and treatment success rates that are below the national target. This is due in part to the fact that high quality TB services are not yet accessible to many people living in remote areas like in provinces of Eastern part of Indonesia.

Therefore, to address these concerns, technical support for universal access in APA2 focused on two key strategies: 1) to increase demand for and access to high quality TB services and improved satisfaction with TB services through promotion of a more patient centered approach in general, and 2) to increase the quality of TB services delivered by all care providers.

All these activities are continuation of activities initiated in APA1. The Patient Centered Approach (PCA) package implementation to assess patient perspectives was not started as planned due to different priority of NTP, however the activity will continue in APA3 and the result will be integrated into the National Strategic Plan.

Technical Outcomes

Expected Outcome **1.1** Increased demand for and use of high quality TB services and improve the satisfaction with the services provided (Population/Patient Centered Approach)					
Outcome Indicators	**Indicator Definition**	**Baseline**	**Target Y2**	**Result Y2**	**Comments**
1.1.1 Updated information available on the quality of services from a patient's perspective	NTP needs to measure the patient perception of the quality of services available/accessible and the appropriate health seeking behavior related to TB (disaggregated by provider and most at risk populations). Available tools for this purpose are TB CAP's QUOTE TB and QUOTE TB Light tools. However, any other tools could be used to measure it.	No (for 2010)	Yes (for 2012)	No (for 2012)	As mentioned above, the implementation of the tools package could not start due to different priorities of NTP. However, the tools were adapted for Indonesia and the data collection will commence early in APA3.
1.1.2 Cost to patients for TB diagnosis is measured	NTP needs to measure the cost to patients for TB diagnosis (disaggregated by provider and most at risk populations). Available tool for this purpose is TB CAP's Tool to Estimate Patients' Cost. However, any other tools could be used to measure it.	No (for 2010)	Yes	No	Patient's cost is not measured, however cost to provider is measured in Central Java by Zina Jarrah, MSH consultant.
1.1.3 Patients' Charter is implemented	The Patients' Charter for Tuberculosis Care (The Charter) outlines the rights and responsibilities of people with tuberculosis. The Charter outlines 15 rights under Care (3), Dignity (2), Information (5), Choice (3) and Confidence	1 (for 2010)	2	1	Patient's Charter implementation is under local NGO as GF sub-recipient. TB CARE I is providing TA on request.

	(2). The implementation divided into adoption (score 1), piloting (score 2) and scaled-up (score 3).				

Expected Outcome

1.2 Increased quality of TB services delivered by all care providers (Supply)

Outcome Indicators	Indicator Definition	Baseline	Target Y2	Result Y2	Comments
1.2.5 Percentage of hospitals implementing DOTS	Percentage hospitals implementing DOTS among general hospitals serving TB patients in TB CARE I areas	38% (for 2010)	42%	44% (397 out of 901)	Among these 397 DOTS hospitals, 189 (48%) are implementing good and moderate quality DOTS practice. Types of support provided by TBCARE I in 8 provinces (West Sumatra, DKI, West Java, Central Java, DIY, East Java, West Papua, Papua) were technical support, on the job training, and supervision to selected general hospitals and lung clinics.
1.2.6 Percentage of prisons conducting screening for TB	Percentage of TB CARE I supported prisons conducting screening for TB among TB CARE I targeted prisons in TB CARE I areas.	34% (for 2010)	55%	100% (20 out of 20)	20 prisons completed their annual TB screening with support of TB CARE I. The challenge in some prisons is the capacity of the referral PHC to perform the sputum exams for all suspects.
1.2.7 Number of health insurance agencies that provide coverage for TB	Number of private and public health insurance agencies that provide coverage for TB	1	3	3	TBCARE I provided technical assistance to involve three health insurance companies in supporting their clients for TB diagnostics and treatment since January 2012. These companies are Askes (for public servants and family), Jamkesmas (for low economics), and Jamsostek (for private employees and family).
1.2.8 DOTS included in standard for hospital accreditation	TB-DOTS strategy to be included in Indonesia hospital accreditation standards	No (for 2011)	Yes	Yes	Considerable efforts were provided by TBCARE I under APA2 to include DOTS in Hospital Accreditation Standard. The standard was officially launched by the Minister of Health in February 2012.

Key Achievements

Main achievement of this technical area is increasing access to and quality DOTS services through

1. The involvement of 3 health insurance companies in supporting TB diagnosis and treatment for patients. These companies include Askes (for civil servant, police and army, covering 17.2 million people), Jamkesmas (for poor people, covering 76.4 million people) and Jamsostek (for employees, covering 4.9 million employees). However, no
2. The inclusion of DOTS in hospital accreditation standards. With this approach, it is expected that more hospital, especially private hospitals, are implementing DOTS, therefore contributing to case finding and treatment success.

3. The increasing number of hospitals implementing DOTS from 325 to 397 out of 901 hospitals in TB CARE I area. Besides, there is an increase in number of hospitals showing quality DOTS among these numbers, i.e. from 147 to 189 hospitals
4. The increasing number of prison implementing DOTS with TB CARE I support from 10 to 20, resulting in 30,941 inmates screened for TB. Among these inmates, 417 were confirmed TB and 100% were put on treatment.

Challenges and Next Steps

Until mid APA2, the implementation of PPM was not sufficient since there was a significant lacking in technical officers. However, recruitment of 5 new technical officers in provincial level could contribute to catch up the implementation target. At the end of APA2, overall work plan was 91%. In line with PPM plan, the next steps are to improve the quantity of hospital implementing DOTS followed by quality improvement of low quality DOTS implementing hospitals to moderate or good quality through various means of supports, including continuing technical assistance for PPM implementation. Continuing supports will also be provided to engage local NGOs and local communities, improve DOTS quality in low performance areas and prisons.

Hospital DOTS Linkage evaluation meeting in East Java province, supported by TB CARE and facilitated by TB CARE I staff

HDL on the job training conducted by TB CARE I staff

In-mates volunteer training in woman detention center in Jakarta (Pondok Bambu detention center)

Clinical mentoring in detention center in Jakarta (Salemba detention center)

Mobile X-Ray in prison in West Java (Cibinong prison)


On-job training for sputum sample preparation in Papua

Laboratories

Diagnostic capacity of TB laboratories in Indonesia has been improved considerably. However, being the primary tool for TB laboratory diagnosis, the quality of sputum smear microscopy still needs improvement. Unfortunately, implementation of external quality assurance (EQA) is still weak and not all laboratories are participating in the EQA system routinely. The implementation and conduct of EQA for smear microscopy varies widely between provinces. TB CARE I supports for LQAS implementation continued in APA2 to 14 provinces. Presently 2165 microscopy laboratories (36.8% of 5883 labs) in 11 provinces are implementing LQAS. Currently, an Excel-based system to assist LQAS implementation is being piloted in 7 districts in West Java provinces

New technologies such as GeneXpert and their potential to rapidly test for Rifampicin resistance as a default for MDR-TB are expected to act as a rapid means of identifying the majority of smear negative TB disease. Detecting Rifampicin resistance may reduce the number of TB culture +/- DST required. In APA2, TB CARE I continued the technical assistance for implementation of the national GeneXpert implementation plan, for collection and analysis of implementation data.

TB CARE I supported to laboratory strengthening follows the National Plan for Laboratory Network Strengthening. The support was provided to TB Sub-Directorate and BPPM. Currently Indonesia has 3 national reference laboratories (NRLs) as follows:

- BBLK Surabaya: Culture and drug susceptibility testing
- BLK Bandung: Sputum smear microscopy
- Microbiology UI: Molecular and research

TB CARE I strategy in APA2 was to support the development of working mechanism between all these laboratories. In addition to these NRLs, Indonesia has 5 quality assured culture DST laboratories operational for performing DST for first line and second line anti TB drugs in four provinces. TBCARE I provided support for the expansion of C/DST laboratories in Indonesia, including technical assistance and the panel testing of these labs.

The implementation of this technical area was led by KNCV, supported by JATA, FHI, WHO and MSH.

Technical Outcomes

Expected Outcome

2.1 Ensured capacity, availability and quality of laboratory testing in country needed to support the diagnosis and monitoring of TB patients

Outcome Indicators	Indicator Definition	Baseline	Target Y2	Result Y2	Comments
2.1.1 A national strategic plan developed and implemented for providing the TB laboratory services needed for patient diagnosis and monitoring, and to support the NTP	0 = Laboratory strategic plan is not available 1 = Laboratory strategic plan is ready but no annual implementation plan and budget available for the current year. 2 = Laboratory annual implementation plan and budget is available for the current year 3 = NTP annual report for the current year includes a section demonstrating progress with the implementation of the	1 (for 2011)	2	2	TBCARE I support to the implementation of lab strategic plan was extensive. TA was provided for the optimal functioning of national reference labs (NRLs), expansion of new method for laboratory quality assurance (LQAS), preparation, implementation and monitoring of panel testing for microscopic lab, also for the preparation of NRL renovation.

	laboratory strategic plan.				
2.1.2 Laboratories with working internal and external quality assurance programs for tests that they provide including: a) smear microscopy, b) culture, c) DST, and d) rapid molecular test	Laboratories have successfully established a mechanism for performing internal quality control (e.g. performing control samples, quality of reagents, etc.) and are enrolled in an EQA program, which is supervised by a higher-level laboratory (i.e. by proficiency testing, blinded re-checking and supervision visits). Participating laboratories should have met WHO standards for QC/EQA results. Both laboratories, supervising and participating, have to keep data on results for verification	a) 30% b) 11% (5/46) c) 100% (5/5) d) N/A (2011)	a) 40% b) 17% (8/46) c) 100% (5/5) d) 100% (17/17)	a) 55% (2104/ 3822 reporting) b) 22% (10/ 46) c) 100% (5/5) d) 29,4% (5/17)	Support and technical assistance were provided for C/DST labs panel testing and microscopy lab EQAS (see photos).

Expected Outcome

2.2 Ensured the availability and quality of technical assistance and services

Outcome Indicators	Indicator Definition	Baseline	Target Y2	Result Y2	Comments
2.2.1 Technical assistance visits from a SRL through a formal link of memorandum of agreement	A selected SRL conducts TA visits to reference laboratories. TA visit reports should be provided by the SRL. Suggestions for improvement made by SRL should be successfully implemented. TA visits have been formalized in a memorandum of agreement.	3 visits	3 visits, 71 days in total	3 visits, 65 days in total, 47 working days	Three visits were carried out by IMVS SA Pathology, Australia to provide technical assistance for NRL strengthening, C/DST lab expansion and quality assurance, and also preparation of laboratory excellence.

Expected Outcome

2.3 Ensured optimal use of new approaches to the laboratory confirmation of TB and incorporation in national strategic lab plans

Outcome Indicators	Indicator Definition	Baseline (2011)	Target Y2	Result Y2	Comments
2.3.1 New technologies have been introduced	Number for each technique below by Central, Provincial, district and Peripheral levels 1. TB culture 2. First line DST 3. Second-line DST 4. HAIN MTBDR plus 5. GeneXpert 6. LED microscopy	1. 46 2. 5 3. 5 4. 3 5. 0 6. 0	1. 46 2. 5 3. 5 4. 3 5. 17 6. 0	1. 46 2. 5 3. 5 4. 3 5. 5 6. 0	Support was provided to improve EQA result of BLK Jayapura and BLK Jakarta to be the new C/DST lab.

2.3.2 Laboratories offering rapid tests for TB or drug-resistant TB	Number of laboratories using GeneXpert MTB/RIF and HAIN MTBDRplus disaggregated by type of technology	Hain 3 Xpert 0	Hain 3 Xpert 17	Hain 3 Xpert 5	Five laboratories below are currently running GeneXpert test with TBCARE I support: 1. Microbiology UI 2. RS Persahabatan, Jakarta 3. RS Moewardi, Solo 4. RS Soetomo, Surabaya 5. RS Hasan Sadikin, Bandung Because of slowdown of PMDT expansion and delayed of procurement of cartridges though GF support implementation of Xperts also limited to 5 only.
2.3.3 Rapid tests conducted	Annual number of tests (separately for GeneXpert MTB/RIF and HAIN MTBDRplus) conducted disaggregated by national and TB CARE areas	Hain 185 Xpert 0	Hain 185 Xpert 1500	Hain 535 Xpert 1213	Among 1700 cartridges procured in APA1, 1213 were used. The remaining 587 cartridges although will expire in October 2012, however Cepheid has provided new barcodes to extend the expired date until mid December 2012.

Key Achievements

1. Introduction of new technology for TB diagnosis was conducted through Xpert machines placement and operation in 5 sites. Among 1700 cartridges procured in APA1, 1213 were used. GeneXpert implementation is expected to speed up the diagnosis and treatment of MDR-TB patients, thus increasing the cure rate and decreasing the number of death among patients waiting for confirmation or treatment.
2. To increase the capacity of DR-TB diagnosis and following up, NTP planned to increase the number of C/DST laboratories throughout the country. Four laboratories were prepared to be panel tested to be C/DST laboratories at the end of 2012. Intensive assistance is essential in preparing new C/DST labs. Once these labs are C/DST certified, these labs will be able to confirm GeneXpert results for DR-TB suspects.
3. Considerable assistance was also provided for LQAS scaling up to 14 provinces, resulting in 11 provinces trained and ready to implement LQAS. This number made up 36% of all laboratories in Indonesia (2165 out of 5883).

Challenges and Next Steps

Xpert machine implementation was hampered due to slow PMDT expansion. Xpert could only be placed in sites where network to PMDT treatment site is established. Aside running 5 sites, other 8 sites have already signed MoU for GeneXpert implementation in June 2012 and are expected to start running in 2013. Continuation to TB CARE I support to Xpert implementation in APA3 includes preparation of new sites to start implementation, site assessment, and monitoring operating sites.

MoU signing for first batch of GeneXpert sites in Solo, January 2012. Five sites are currently running.

On-job training for EQAS in Papua provincial laboratory

Infection Control

TB infection control (TB-IC) in health facilities and prisons (*congregate settings*) is critical for TB/HIV and DR-TB case management. Most health facilities that provide services for TB/HIV lack basic implementation of TBIC measures. Therefore, TB CARE I support for this technical area – provided by KNCV and FHI 360 – was focused on increasing political commitment, scaling up TB-IC and strengthening TB-IC monitoring.

TB-IC implementation plan was socialized in 5 provinces as planned, i.e. DKI, West Java, Central Java, East Java and South Sulawesi. TB-IC guidelines including the building design standards was revised. In prison settings, TB-IC guidelines were also finalized, printed and are being distributed to provincial offices of law and human rights. In addition, TB-IC assessment was conducted in 20 prisons.

To support this TB-IC implementation, TB CARE I also addresses environmental element of the health care facilities. Renovation was planned for several diagnosis and treatment sites. While renovation process has completed for Persahabatan hospital out-patient clinics, renovation for other 4 PMDT hospitals, i.e. Sardjito hospital in DIY, Hasan Sadikin hospital in West Java, Adam Malik hospital in North Sumatra and Sanglah hospital in Bali, could not start yet. The design and budgeting process took longer time than expected. However, design and budget are agreed for 12 health centers in East Java and DKI Jakarta.

Technical Outcomes

Expected Outcome **3.1** Increased TB IC Political Commitment					
Outcome Indicators	**Indicator Definition**	**Baseline**	**Target Y2**	**Result Y2**	**Comments**
3.1.1 National TB- IC guidelines have been approved and disseminated in accordance with the WHO TB IC policy	The TB-IC guidelines must have been approved by the NTP or MOH, and must be consistent with the 2009 WHO Policy on TB-IC addressing the recommendations for managerial, administrative, environmental and personal protection controls in healthcare facilities, in at least one other congregate setting such as prisons and in households/community	Yes (2010)	Yes	Yes	A technical guideline for TB-IC implementation in prison settings was developed, complementary to TB-IC guidelines.
3.1.2 TB- IC measures included in the overall national IPC policy	TB-IC measures must be included (in a special section on transmission-based airborne infection prevention and control) in the overall national IPC policy	Yes (2010)	Yes	Yes	Target achieved
Expected Outcome **3.2** Scaled-up implementation of TB-IC strategies					
Outcome Indicators	**Indicator Definition**	**Baseline**	**Target Y2**	**Result Y2**	**Comments**

3.2.2 Key facilities with IC focal person, implementation plan, budget, and monitoring system	Key facilities such as MDR treatment facilities, ART clinics, DOTS clinics, C/DST labs, GeneXpert sites, prisons, and tertiary referral hospitals must have at least a) a designated IC focal person responsible for TB IC, and b) a budgeted facility implementation plan and c) a monitoring system reporting on TB IC implementation	7 (2010)	12	11	TB CARE I focus in APA2 was to prepare these sites for TB-IC implementation, while the monitoring activity to see whether these sites are implementing TB-IC will be done in APA3.

Key Achievements

1. Updating and printing technical guidelines for TB-IC in prisons settings mainly in terms of the conduction of TB screening and separation of TB and HIV wards in prison settings. The guidelines are now being distributed to 5 provinces
2. Renovation is completed for out-patient clinics in Persahabatan hospital (DKI Jakarta province) in September 2012
3. Scaling up TB-IC implementation in 5 provinces by conducting in-house training in hospitals. These hospitals are mainly PMDT hospitals and are expected to implement TB-IC

Challenges and Next Steps

Renovation in some PMDT sites could not be finished due to late start and long time needed of designing and budgeting process. However, the process will continue in APA3. After being trained on TB-IC and finishing the renovation, these sites will be closely monitored for TB-IC implementation in APA3.

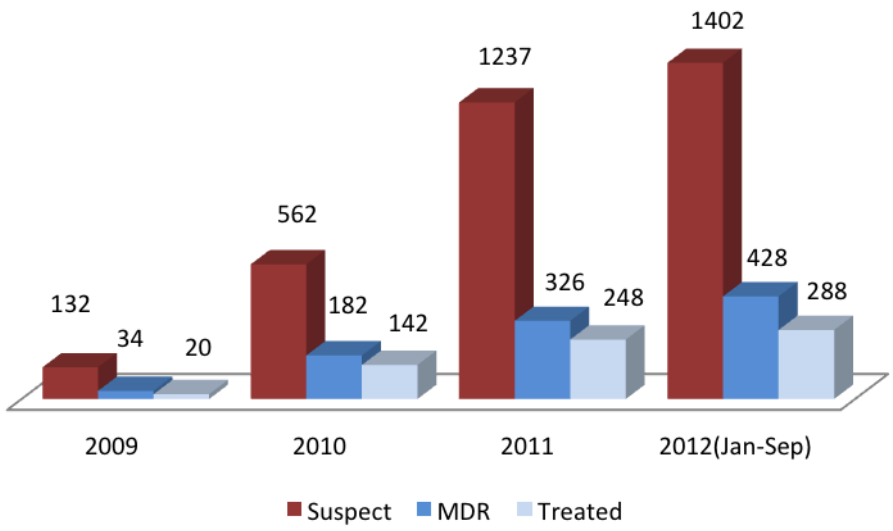
TB-IC socialization in East Java

National action plan and technical guidance for TB-IC in prison settings. Documents updated and printed with TB CARE I support

Programmatic Management of Drug Resistant TB (PMDT)

Estimated MDR-TB burden in Indonesia is 1.9% (1.4 – 2.5) among for new patients and 12% (8.1 – 17) among retreatment cases. During 2012 only, 1402 suspects were found and among them 428 are MDR-TB positive. This number made total number of MDR-TB confirmed cases in Indonesia 970 cases.

In Indonesia, PMDT started in August 2009 with two pilot sites (Jakarta and Surabaya) and later expanded to three other areas (Malang, Solo and Makassar) in 2010 with substantial support from TB CAP and TB CARE I APA1. As continuation to this support, technical assistance is continuously provided by WHO, KNCV, FHI 360, and MSH. During APA2 period, four new PMDT sites were established, among them, two started patients admission and treatment.



Technical Outcomes

Expected Outcome **4.1** Improved treatment success of MDR					
Outcome Indicators	**Indicator Definition**	**Baseline**	**Target Y2**	**Result Y2**	**Comments**
4.1.1 TB patients, suspected of MDR, dying between request for lab examination and start of MDR treatment	Percentage of TB patients (Cat I, Cat II) with confirmed HR or R resistance, who died between the date of the lab request and the start of MDR treatment Among all TB patients (Cat I, Cat II) with confirmed HR or R resistance	Confirmed MDR TB 427, Died while waiting: 29(6.8 %) (for 2011)	Confirmed MDR TB 790, Died while waiting<5 %	Confirmed MDR TB 970, Died while waiting75 (7.7%)	A strategy to speed up the enrollment of confirmed cases should be defined.
4.1.2 MDR TB patients who are still on treatment and have a sputum	Percentage of MDR TB patients in a cohort who are still on treatment and had culture conversion	MDR TB enrolled 180, converted within 6	MDR TB enrolled 700, converted within 6	58.1% (240 out of 413)	See above

RS Adam Malik, North Sumatra culture conversion 6 months after starting MDR-TB treatment	latest at month 6 (having had 2 negative sputum cultures taken one month apart and remained culture negative since) among all MDR patients who started treatment in the cohort.	months treatment: 139 (75.6%) (for 2011)	months treatment :>75%)		
4.1.4 MDR TB patients who have completed the full course of MDR TB treatment regimen and have a negative sputum culture	Percentage of MDR TB patients in a cohort who completed a course of MDR treatment and who fit the WHO criteria for cure or completed treatment Among all MDR patients who started treatment in the cohort	MDR TB patients enrolled: 44, cured: 8 (18.2%), treatment completed 2.3%, died 40.9%, defaulted 29.5% and failed 9.1% (for 2011)	MDR TB cure rate 80%	70.3% (109 out of 155)	See above

Figure 2. Existing and new PMDT sites in APA2

Key Achievements

1. Among 4 new established sites, two new sites (Hasan Sadikin hospital in West Java and Adam Malik hospital in North Sumatra) started PMDT diagnosis and treatment
2. With 7 sites operating in APA2, a total of 970 cases were confirmed for MDR-TB since the start of PMDT in 2009 and 288 were put on treatment. By the end of September 2012, number of patient cured were 109
3. Comprehensive national PMDT guidelines in programmatic and clinical aspects (including the algorithm for rapid diagnostic, MDR TB HIV manuals and side effect management of SLD) were updated
4. Development of conceptual framework for development of model PMDT sites in Indonesia. This framework is being implemented to develop a model PMDT site in one of existing PMDT sites. By mid 2012, NTP appointed Moewardi hospital as the role model for PMDT site development.

On the suggestion of NTP, Director of Moewardi hospital shared their experiences during National TB monitoring evaluation meeting held in February 2012.

5. Five provinces have completed self-assessment for PMDT expansion in 2013. The provinces are NAD, West Sumatra, North Sulawesi, West Sulawesi and Papua. The assessment results were reviewed by PMDT national team and the draft of provincial PMDT scale up plan for these 5 provinces was developed.

Challenges and Next Steps

NTP uses different approach to speed up PMDT expansion. Potential PMDT sites carry out self-assessment and the result is presented and reviewed by national PMDT team. TB CARE I will continue providing support and assistance. However, in existing sites, process to the treatment enrolment of the patients including obtaining informed consent for treatment, baseline kidney and liver tests, and also C/DST confirmation is potential to delay treatment. Studies are being conducted to explore GeneXpert's role to address this situation.

Thorough evaluation of PMDT recording and reporting system should be done to ensure that no data discrepancy found among utilized data collection tools, i.e. e-TB manager, MDR-TB register (TB 03, 07, 08 and 11). This issue will be discussed in the next national PMDT M&E meeting that will be held November 2012.

On the other hand, PMDT implementation in prisons showed slow progress. This is affected by very limited operational budget for waste management and renovation. TB CARE I brought the findings to Director of Correctional System MoLHR and advocated to speed up the preparation.

PMDT patient gathering in DKI Jakarta site. This is part of TB CARE I activities by facilitating events for patients and family to meet TB experts and ex-patients and to get knowledge and support

Persahabatan hospital (DKI Jakarta PMDT site) out-patient clinic renovated with TB CARE I support

PMDT IEC materials printed with TB CARE I support in APA2


PMDT patient gathering in East Java site.

TB-HIV Collaboration

HIV and TB epidemics are mutually reinforcing. TB is the most common opportunistic disease experienced by and is a leading cause of death among HIV-infected people. The presence of HIV infection complicates both the detection and treatment of TB. The emergence of MDR-TB among HIV patients is of special concern given complicated co-management, and as a result HIV patients have been included in the of MDR-TB suspects to be tested. The NTP has recognized the threat posed by TB-HIV co-infection, and has assigned high priority to addressing TB-HIV in its strategic planning.

TB CARE I TB-HIV activities in APA 2, implemented mainly by FHI 360 and WHO, responded directly to priority needs outlined in the National TB-HIV Strategy. The strategies supported by TB CARE I were establishment of mechanism for TB-HIV collaboration, including surveillance of HIV prevalence among TB patients, joint TB-HIV planning, and M&E; decreasing the burden of TB in people living with HIV/AIDS through intensifying TB case finding among PLHIV and TB infection control in health care and congregate settings; and decreasing the burden of HIV in TB patients through HIV testing and counseling to TB patients.

Technical Outcomes

Expected Outcome

5.1 Strengthened prevention of TB/HIV co-infection

Outcome Indicators	Indicator Definition	Baseline	Target Y2	Result Y2	Comments
5.1.2 Facilities that are providing HIV prevention message at TB services	Percentage of randomly selected facilities, providing DOTS, which have a trained staff on HIV counseling among total number of facilities providing DOTS.	90% (for 2011)	100%	100% (73 out of 73)	All of the TB CARE supported facilities have been trained for HIV counseling.

Expected Outcome

5.2 Improved diagnosis of TB/HIV co-infection

Outcome Indicators	Indicator Definition	Baseline	Target Y2	Result Y2	Comments
5.2.1 HIV-positive patients who were screened for TB in HIV care or treatment settings	Percentage of HIV-positive patients seen at HIV testing and counseling or HIV treatment and care services who were screened for TB symptoms among all HIV-positive patients seen at HIV testing and counseling or HIV treatment and care services, over given time period.	65% (for 2010)	75%	77% (2344 out of 3045)	This resulted from mentoring to facilities, evaluation of TB-HIV indicator results and plan of actions for HIV care/treatment settings.

5.2.2 TB patients with known HIV status	Percentage of all TB patients registered over a given time period who were tested for HIV (after giving consent) during their TB treatment among all TB patients registered over a given time period	6% (for 2010)	15%	15% (963 out of 6218)	National guideline recommends to test all TB patient for HIV only in Papua and West Papua province, although in some of facilities which receive TA support from TB CARE put efforts in testing for all TB patients.
5.2.3 TB patients who are HIV positive	Percentage of all TB patients registered over a given time period who test HIV-positive (after giving consent) during their TB treatment among TB patients registered over the same given time period who are tested for HIV (after giving consent)	2% (for 2010)	5%	14% (139 out of 963)	The percentage is high because in all areas in Indonesia (except Papua), HIV testing is performed for those who are identified to have risk of HIV.

Expected Outcome

5.3 Improved treatment of TB/HIV co-infection

Outcome Indicators	Indicator Definition	Baseline	Target Y2	Result Y2	Comments
5.3.1 Registered HIV infected TB patients receiving ART during TB treatment	Percentage of all HIV-positive TB patients, registered over a given time period, who receive ART (are started on or continue previously initiated ART) Among all HIV-positive TB patients registered over the same given time period.	30% (from 2010)	40%	44% (186 out of 418)	Mentoring to facilities was done to increase referral to ART hospital for those who are diagnosed HIV, and to record those who received ART in TB form. Mentoring to ART units was also provided to assure the staffs to follow national guideline to provide ART to TB patients as soon as TB drugs are well tolerated irrespective of CD counts.
5.3.2 HIV-positive TB patients who receive CPT	Percentage of HIV-positive TB patients, registered over a given time period, who received (given at least one dose) CPT during their TB treatment among total number of HIV-positive TB patients registered over the same given time period.	60% (for 2010)	80%	82% (344 out of 418)	This resulted from mentoring to facilities, evaluation of TB-HIV indicator results and plan of actions for HIV care/treatment settings.

Key Achievements

1) As a mean to strengthen of TB prevention in PLHIV, four IPT pilot sites (Hasan Sadikin, Marzuki Mahdi, Cipto Mangunkusumo and Persahabatan hospital) have completed the enrolment of 197 PLHIV out of 200 planned with TB CARE I support.
2) As a result of continuous mentoring activity in HIV settings:
    a. 2344 HIV patients were screened for TB
    b. among them 292 were confirmed TB
    c. and 283 were put on treatment
3) While for TB settings, the figures are as follows:
    a. TB patients known they are HIV positive before TB treatment: 137;
    b. TB patients tested for HIV: 923;

c. Total HIV+ positive among all above: 418;
d. Total given ART among above: 187.

4) Obtained commitment of 5 provincial offices of Ministry of Law and Human Right through the signing of agreement for TB-HIV and TB control in the prison. The agreement covers commitment to conduct annual TB mass screening, to facilitate availability of isolation room, provide access to TB and HIV treatment, improve network with Provincial and District Health Office, etc.

Challenges and Next Steps

The lacking of staff carrying data collection and reporting and the data quality remain a challenge. TB CARE I will continue providing mentoring and advocacy to these sites in order to improve data and report quality in TB-HIV settings and also continue advocacy to stakeholders since the leadership and commitment of the management are essential to improve TB-HIV collaboration.

TB-HIV IEC materials development through FGD in Papua

TB and TB-HIV education in Jakarta (Pondok Bambu detention center)

Health System Strengthening (HSS)

Decentralization in the health sector increases the complexity of the challenges that are overarching: financing, management and coordination, integration of the basic and new emerging TB diseases services, and human resource development. High staff turnover and uneven staff distribution across provinces/districts caused higher demand toward availability of skilled staff, especially in remote areas and most needy populations. On the other hand, with the anticipated cessation of Global Fund (GF) assistance to the Ministry of Health (MOH) in its efforts to reduce the burden of AIDS, TB and Malaria (ATM), the MOH has committed to ensure the sustainability of these programs by not only replacing the GF funding with domestic funding but also by increasing it.

Some activities were conducted in APA2 in order to answer these challenges by ensuring that TB control is embedded as a priority within the national health strategies and plans, with commensurate domestic financing and supported by the engagement of partners, also to ensure that TB control components became integral part of provincial/district plans, strategies and service delivery. The activities were carried out by 5 collaborating partners, i.e. ATS, KNCV, MSH, The Union and WHO. These activities included:

1) Providing technical assistance on Human Resource Development in TB control, focusing on PMDT expansion and support to Leadership and program management training in low DOTS performance provinces and districts
2) Strengthening and expanding planning and budgeting skills and systems to increase local government funding for TB.
3) Increasing commitment and local government funding for TB through various ACSM activities including capacity building, media workshop, campaign event, and determining the economic benefit of preventing and treating TB
4) Developing an implementation plan for the NTP exit strategy.
5) Conducting detailed cost and financing analyses of an expanded district TB program including the use of GeneXpert and a prison / MDR-TB program.
6) Updating standardized TB curriculum for medical schools in Indonesia.

Under this technical area too, TB CARE I organized APA3 consensus meeting attended by more than 80 participants from NTP, USAID Mission, all TB CARE I collaborating partners, JSI/DELIVER, MOH (medical services, medical supports, center of data and information), provincial health offices, and professional organizations. Each technical area sat with the respective implementing partners in small groups discussing the work plan and expected outcomes (see photos below).

Technical Outcomes

Expected Outcome

6.1 Ensured that TB control is embedded as a priority within the national health strategies and plans, with commensurate domestic financing and supported by the engagement of partners

Outcome Indicators	Indicator Definition	Baseline	Target Y2	Result Y2	Comments
6.1.1 TB care and control strategic plan embedded within national health strategies, including	Countries with National Health Strategies that include specific TB care and control activities, specific for TB or as part of wider strategies for communicable diseases in their overall national	Yes	Yes	Yes	TB specific National Health Strategies (STRANAS) available for year 2010 – 2014. TBCARE I for this APA2 period included the assistance to implement the STRANAS and assistance to the development of the exit strategy document.

quantifiable indicators and budget allocations	health strategies, budgeting processes and sector monitoring system (HMIS). There is evidence that TB care and control activities are mentioned in overall national strategies, planning document and budget monitoring systems.				
6.1.2 Government budget includes support for anti-TB drugs	Current annual government budget allocates funding for anti-TB drugs	Yes	Yes	Yes	Target achieved
6.1.3 CCM and/or other coordinating mechanisms include TB civil society members and TB patient groups	Civil society members and TB patient groups that are officially registered as being members of the CCM and particulate in the regular CCM meetings	Yes	Yes	Yes	Target achieved

Expected Outcome

6.2 TB control components (drug supply and management, laboratories, community care, HRD and M&E) formed integral part of national plans, strategies and service delivery of these components

Outcome Indicators	Indicator Definition	Baseline	Target Y2	Result Y2	Comments
6.2.2 Status of HRD strategic plans implemented	1 = HRD strategic plan is ready but not yet officially incorporated in country strategic plan 2 = NTP has developed an annual HRD implementation plan and budget for the current year 3 = NTP annual report for the current year includes a section demonstrating progress with the implementation of the HRD strategic plan	0 (for 2011)	3 (for 2014)	2	NTP has developed an annual HRD implementation plan and budget for current year. However, annual report including a section demonstrating progress with the implementation of HRD strategic plan was not developed due to lack of HRD database system available, which will be answered by the implementation of SITT phase 2 (see next technical area).
6.2.3 People trained using TB CARE funds	Health care workers at all levels trained on any area of TB control using TB CARE funds	446 (for 2010)	500	931	Trainings were conducted in all TBCARE I technical areas to various health care workers at any level to answer the need of skilled and knowledgeable health care workers to support and implement national TB program.

Key Achievements

1) Developing official exit strategy policy that was published in April 2012, accompanied by economic burden figures, service delivery costing model, TB expenditure monitoring system. This is part of TB CARE I support to ensure government funding for TB.
2) Providing NTP with tools to improve advocacy capacity to increase the local government commitment and budget through updating ACSM training curriculum and module
3) Supported the implementation of HRD action plan as part of national strategy, by facilitating NTP and MoH HRD body (BPPSDM) to carry out a 6-monthly coordination meeting and mentoring to provinces in order to develop localized HRD action plan.
4) Successfully organized TB Day Commemoration 2012 in Jakarta and attracted over 8,000 people for fun-walk and 1,000 people in the scientific seminar (see photos below).

Challenges and Next Steps

Support in exit strategy implementation will be provided following up supports mentioned above, through updating the exit strategy, preparing the road map, implementation plan and exit strategy implementation evaluation tools. TB CARE I will continue its support in HRD action plan implementation in APA3 through the development of localized/provincial HRD action plan and integrate this action plan with laboratory and PMDT staffing requirements.

TB Day Commemoration in Indonesia attracted more than 8,000 people

TB CARE I booth in TB Day Commemoration attracted a lot of visitors

TB CARE I APA3 Consensus Meeting in June 2012 in Jakarta. This meeting was attended by more than 80 participants from USAID Indonesia Mission, NTP, professional organizations, university, province health offices, etc.


FGD was conducted per technical area with corresponding partners to discuss activity plan and expected outcomes

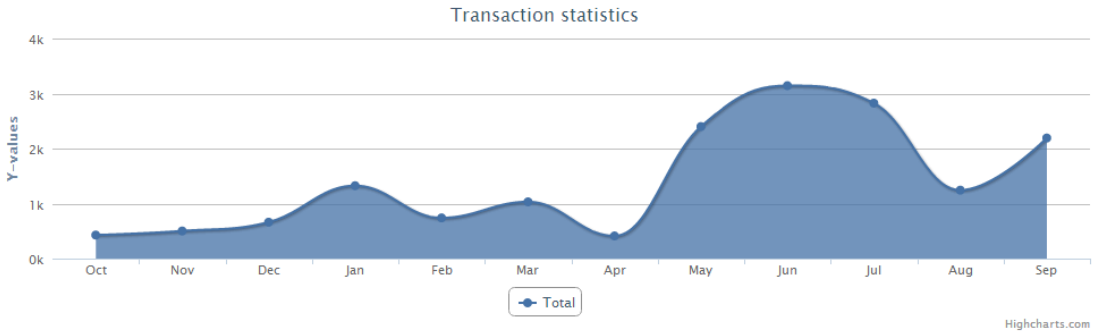
Monitoring & Evaluation, Surveillance and OR

The TB surveillance (data and systems) should provide data of sufficient quality and coverage. Every year data need to be validated for the TB global report to fulfill the needs of GF progress updates and grant reporting. Additionally, program data analysis, interpretation, dissemination and its application (informing policy makers, guiding policy decisions, developing interventions, and planning and evaluating programs) are still weak.

Therefore, TB CARE I approach to this area is by strengthening TB surveillance, improving NTP capacity of NTP to analyze and use quality data for TB program and improve NTP capacity to perform operational research as a means of decision making support.

In accordance to the planning started in 2009, TB CARE I continued supporting NTP on e-TB manager implementation. Several challenges and barriers for the system implementation were overcome. Major concern for this implementation is the system's sustainability within NTP for the upcoming future, to demonstrate the correct approach for that, NTP's programmer trained last December has developed more than 25 new reports, facilitating this way the comparison of paper-based control and data encoded in e-TB manager.

TB CARE I joint (MSH/KNCV) with NTP in May has changed the approach and from that moment on, it's clear the evolution of the date encoded, as demonstrated in the chart below (Figure 2). The chart shows that number of transactions fluctuates following international TA conducted by international e-TB manager consultants. This suggests that e-TB manager still needs to be supervised closely to ensure the implementation.



Provinsi/National	Monthly distribution												
	2011			2012									Total
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Bali									25	17	50	14	106
Central Java	181	68	45	182	74	186	92	493	170	51	82	515	2,139
DKI Jakarta	18	199	304	452	260	16	17	1,038	1,284	1,710	193	633	6,124
East Java	229	235	313	378	354	332	299	708	1,026	796	411	421	5,502
Jawa Barat								69	283	86	77	84	599
South Sulawesi				313	52	498	4	92	355	166	431	525	2,436
Total	428	502	662	1,325	740	1,032	412	2,400	3,143	2,826	1,244	2,192	16,906

Figure 2. e-TB manager transaction trends

New emerging challenges and innovations in TB control and the need to monitor progress of TB morbidity and mortality in Indonesia create the need to determine a Priority Research agenda in TB control. The strategic plan (STRANAS 2011-2014) puts emphasis on the strategic use of information for decision making in the development of TB control program. The information is produced from both the operation research and routine surveillance.

Capacity to conduct operational research in the country is still rather limited, although operational research teams in 29 provinces have been trained during TB CAP and TB CARE APA1. A range of activities aimed to improve the capacity of the NTP to perform operational research was done, this included: development, support, and evaluation of TB Operational Research; trainings on grant and academic writing in order to bolster Indonesian contributions to international journals and conferences; and support for implementation of 4 operational research projects.

While in terms of routine surveillance, NTP collaborated with TB CARE I for the integration of the TB strategic information system into a web-based National Health Information System (SIKNAS) that is being developed by Pusdatin (Centre for Data and Information, Ministry of Health). Currently the first phase development of the system has finished and system is implemented in all 33 provinces. By the end of APA2, case-based data are also available online for first half year of 2012, that is 91% of all districts for first quarter data and 74% of all districts for second quarter data.

The partners responsible for M&E, Operational Research, and Surveillance activities under APA2 are KNCV, WHO, FHI 360, and MSH.

Technical Outcomes

Expected Outcome

7.1 Strengthened TB surveillance

Outcome Indicators	Indicator Definition	Baseline	Target Y2	Result Y2	Comments
7.1.1 An electronic recording and reporting system for routine surveillance exists at national and/or sub-national levels	The routine Electronic Recording and Reporting (ERR) TB surveillance for all TB patients is based on at least all standard variables that are included in the TB treatment register. The record/case based data flow from data collection level to national level (via intermediate levels) is digital. Note that having an ERR just for MDR-TB also fulfills this indicator.	Yes (for 2011)	Yes	Yes	TBCARE I is intensively and continuously providing assistance to NTP for development and implementation of SITT (tuberculosis information system) consisting of case-based and logistics module.

Expected Outcome

7.2 Improved capacity of NTPs to analyze and use quality data for management of the TB program

Outcome Indicators	Indicator Definition	Baseline	Target Y2	Result Y2	Comments

7.2.1 National M&E plan is up-to-date	National M&E plan is up-to-date based on global policy and M&E frameworks, and reflect the findings of the most recent systematic assessment of surveillance and programmatic data	Yes (for 2011)	Yes	No	National M&E plan was latest updated April 2010. TBCARE I has advised NTP M&E to update the national M&E plan.
7.2.2 NTP provides regular feedback from central to lower levels	Percentage of quarterly feedback reports prepared and disseminated disaggregated by levels among total number of recipient units/facilities	100% (for 2011)	100%	100%	NTP provides regular feedback to provinces through M&E meeting twice a year.
7.2.3 A data quality audit at central level has been conducted within the last 6 months	Data quality audit conducted within the last 6 months at central level	Yes (for 2010)	Yes	Yes	TB data quality is maintained through regular supervision and data validation to health facilities, district level, and provincial level from respective supervising level.
Expected Outcome **7.3** Improved capacity of NTPs to perform operational research					
Outcome Indicators	**Indicator Definition**	**Baseline**	**Target Y2**	**Result Y2**	**Comments**
7.3.1 OR studies completed and results incorporated into national policy/guidelines	Number (of OR studies and instances reported separately)	0 (for 2011)	2	0	Currently 4 OR studies are being conducted and another study is still in subcontracting process, the studies are expected to finish in 2013. Delay was caused by long subcontracting process.

Key Achievements

1) TB CARE I assisted NTP to submit complete national TB data to WHO global TB collection data system before the due date of 16 May 2012
2) Supported TB surveillance strengthening by assisting the development and implementation of SITT in 33 provinces. To date, SITT is implemented in 33 provinces. TB data are available for 1st and 2nd quarter of 2012 for more than 91% and 73% of all districts in Indonesia (respectively). The development will continue in APA3 with approach to laboratory, private involvement, and human resource.

3) Provided technical assistance for prevalence survey preparation. Survey protocol, questionnaire and field manual were finalized. The protocol was then pilot tested and evaluated.
4) Provided technical assistance to NTP for TB surveillance strengthening by finalizing DRS sentinel technical guidelines and HIV sentinel surveillance protocol.

Challenges and Next Steps

Considerable support and assistance will be provided by TB CARE I to address prevalence survey needs in APA3. The support has started in APA2 and will continue in APA3 for preparation, procurement and technical assistance. SITT development and implementation will continue to the second phase in 2013. This phase development will include HRD, laboratory and PPM module.

Drug supply and management

The GF ATM has identified specific, measurable, and time bound actions that are associated with the ongoing provision of the NTP's performance-related grant. Specifically, these include revised national level storage arrangements, an improved recording and reporting system for drug management, and the implementation of an electronic surveillance system. Additionally, drug availability is an important measure of a supply system and the absence of the stock-outs in key locations that have occurred in the past could be a key indicator of success in the coming year.

The implementing partners in drug supply and management area under APA2 were MSH - through a resident country advisor (Andrew Marsden) who started in APA2 first quarter with USAID support, and KNCV. The approach chosen to TB CARE I support to drug supply and management includes revised national level storage arrangements, an improved recording and reporting system for drug management, and the implementation of an electronic surveillance system. Additionally, drug availability and the absence of the stock-outs in key locations in the past are the representation of supply system that was successfully maintained during APA2 with TB CARE I support.

Technical Outcomes

Expected Outcome

8.1 Ensured nationwide systems for a sustainable supply of anti-TB drugs

Outcome Indicators	Indicator Definition	Baseline	Target Y2	Result Y2	Comments
8.1.1 Quarterly national stock information available Indicator Value: Number (as months of stock for FLDs and SLDs separately)	Summary stock level data is available to the NTP for the last quarter, via a ledger, an electronic inventory management system or similar, for their use in their planning and management	FLD: cat1 350,232 kits (14,8 months), cat2 5,787 kits (9.1 months), child 24,867 (1.4 months) SLD: Ethambutol (213,696), Pyrazinamid (207,000), Kanamycin (7,450), Capreomycin (4,402), Levofloxacin (151,900), Etionamide (329,400), Cycloserine (327,400), PAS (9,510), B6 (437,000) The minimum month of stock availability for FLD and SLD: 4 months	FLD : cat1 397,501 kits, cat2 9,801 kits, child 44,668 kits SLD : Etha mbutol (2,419,200), Pyrazinamide (2,419,200), Kanamycin (81,000), Capreomycin (27,000), Levofloxacin (1,905,120) Ethionamide (1,814,400), Cycloserine (1,814,400), PAS (181,440),Vit B6 (1,814,400)	As per 31 June 2012 FLD Cat 1 287.330 kits (11,3 months); Cat 2 5.332 kits (8.5 months); Child 45.335 kits (15.8 months) SLD Ethambutol = 133.459 tbl (6 month) Pyrazinamide = 168.094 tbl (6 month), Kanamycin = 35.734 vial (9 month), Capreomycin = 2.522 (5 month), Levo = 206.564 (6month), Ethionamide = 142.192 tab (6 month), Cycloserine = 145.302 tab (6 month), PAS = 12.070 sachet (8 month), Vit B6= 198.586 tab (8 month)	No stock-out

8.1.2 Updated SOPs for selection, quantification, procurement, and management of TB medicines available	Completed and agreed SOPs for drug management available for NTP usage not older than five years	No (for 2010)	Yes	Yes	Latest update on the SOPs was November 2011
8.1.3 Diagnosed MDR patients who cannot be put on treatment due to stock-out of second-line anti-TB medicines	It is expected that all MDR patients are put on treatment as soon as they are diagnosed. Lack of SLDs would lead to delayed start of treatment. NTP should be keeping a list of all MDR patients diagnosed, put on treatment and waiting for treatment	0	0	0	No MDR-TB patients could not be put on treatment due to stock-out

Key Achievements

1) Assisting NTP in addressing the Global Fund's SSF conditions including the development of the Indonesia Country profile, as now formally accepted and deployed across the ATM programs, in place of the previous Procurement Plan
2) Identification of a compliant process for site selection for the commercial outsourcing of the SLD storage, outside the national warehouse and which is now completed; this to ensure optimal conditions for this key resource.
3) Identification and development of standard operating procedures to address Global-Fund mandated TB quality assurance processes at the Port of Entry and which have cross-program relevance.
4) Updating e-TB manager handbook for e-TB manager implementation in existing 6 PMDT sites and updating SLD management training module

Challenges and Next Steps

Different challenges exist for both FLD and SLD procurement.

1) For FLD: Overstock in the last year was because procurement was planned in provincial and national level. However, redistribution was done in health facility level to address this challenge.
2) For SLD: Long custom process in port of entry.